

FIG. 1
(PRIOR ART)

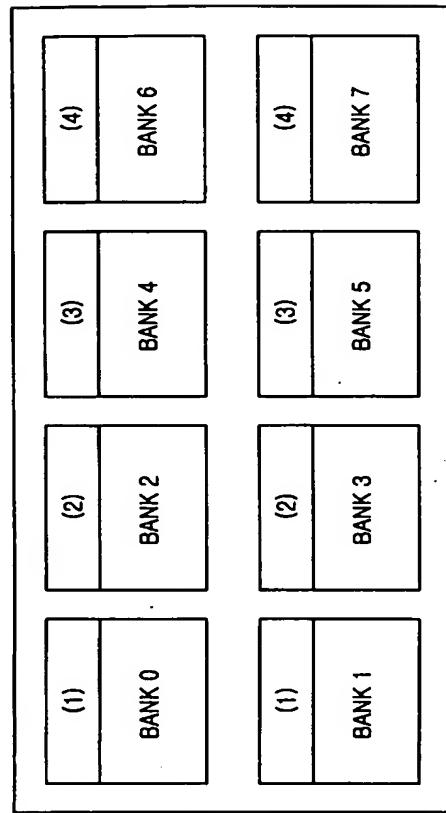


FIG. 2

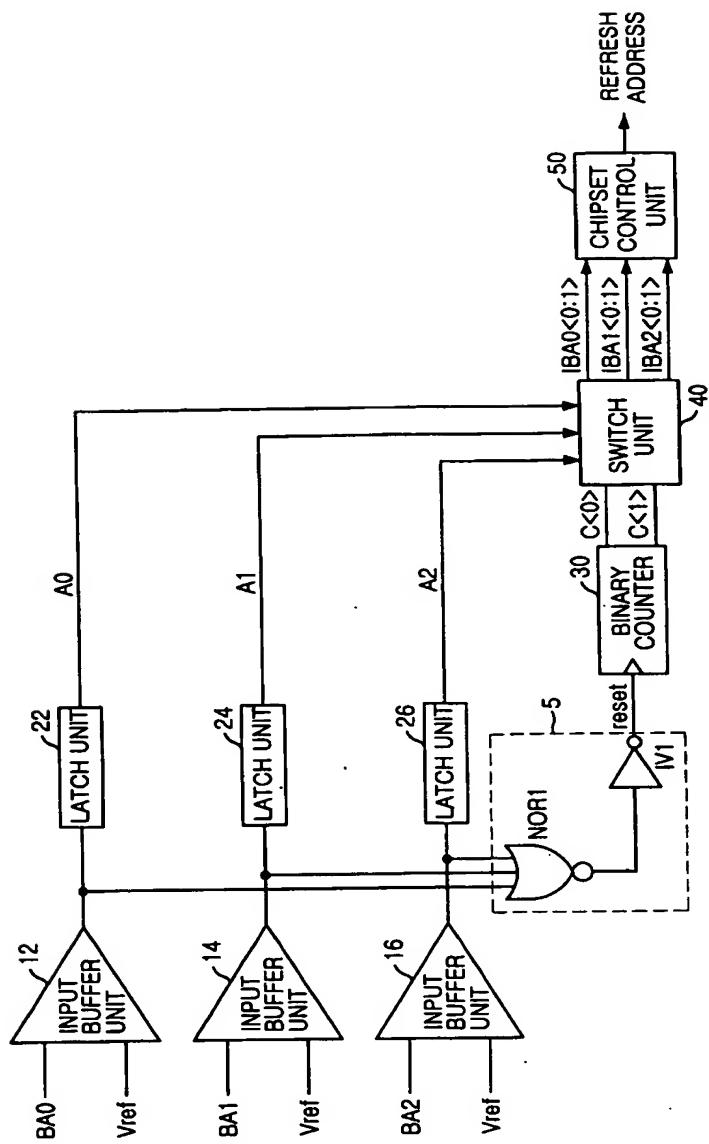


FIG. 3

REFRESH COMMAND SIGNAL	BANK COMBINATION CASE 1			BANK COMBINATION CASE 2			BANK COMBINATION CASE 3					
	BA2	BA1	BA0	REFRESH -ING BANK	BA2	BA1	BA0	REFRESH -ING BANK	BA2	BA1	BA0	REFRESH -ING BANK
AUTOMATIC REFRESH	0	0	1	0, 1	0	1	0	0, 2	1	0	0	0, 4
AUTOMATIC REFRESH	0	0	1	X	0	X	0	X	X	0	0	0
AUTOMATIC REFRESH	0	0	1	X	0	X	0	X	X	0	0	1, 5
AUTOMATIC REFRESH	0	0	1	X	0	X	0	X	X	0	0	1
AUTOMATIC REFRESH	0	0	1	X	0	X	0	X	X	1	0	2, 6
AUTOMATIC REFRESH	1	0	X	4, 5	0	0	1	0	4, 6	0	0	0
AUTOMATIC REFRESH	1	0	X	6, 7	0	0	1	X	5, 7	0	0	3, 7